Coronary Heart Diseases
Summary of Methods and Data for Estimate of Costs of Illness

1. Estimated Total Economic Cost $ 99.8 billion
    Estimated Direct Cost $ 53.1 billion
    Estimated Indirect Cost $ 46.7 billion
    Reference Year   1999
    ICD Providing the Estimate   NHLBI

    Direct Costs Include: Other related nonhealth costs   No
    Indirect Costs Include:
        Mortality costs   Yes
        Morbidity costs: Lost workdays of the patient   Yes
        Morbidity costs: Reduced productivity of the patient   No
        Lost earnings of unpaid care givers   No
        Other related nonhealth costs   No
    Interest Rate Used to Discount Out-Year Costs   6 %
2. Category code(s) from the International Classification of Diseases, 9th Revision, Clinical Modification,(ICD-9-CM) for all diseases whose costs are included in this estimate: 410-414.
3. Estimate Includes Costs:
        Of related conditions beyond primary, strictly coded ICD-9-CM category   No
        Attributable to the subject disease as a secondary diagnosis   No
        Of conditions for which the subject disease is an underlying cause   No
4. Population Base for Cost Estimate (Total U.S. pop or other)   Total U.S. pop.
5. Annual (prevalence model) or Lifetime (incidence model) Cost: Annual
6. Perspective of Cost Estimate (Total society, Federal budget, or Other)   Total society
7. Approach to Estimation of Indirect Costs   Human capital

8. Source of Cost Estimate:

The Morbidity and Mortality Chartbook on Cardiovascular, Lung, and Blood Diseases, 1998, National Heart, Lung, and Blood Institute, October, 1998 has cost estimates for 1998. The Chartbook is on the web through the NHLBI home page: http://nhlbi.nih.gov/index.htm.   Estimates for 1999 appear in the American Heart Association publication: "1999 Heart and Stroke Statistical Update" released in late 1998. See AHA website: http://www.amhrt.org.

9. Other Indicators of Burden of Disease:

Coronary heart disease is the a leading cause of death in men and women. An estimated 12 million Americans have coronary heart disease.

10. Commentary:

Direct cost estimates for heart disease in 1995 and 1997 were estimated by Tom Hodgson (National Center for Health Statistics) and provided to the NHLBI and the American Heart Association.   Linear extrapolation of the 1995 to 1997 change to 1998 and then to 1999 was the method to estimate direct costs of coronary heart disease for 1999. Hodgson's estimates are based on a variety of survey data from the NCHS, the Health Care Financing Administration, and elsewhere. A paper with his estimates for 1995 has been submitted for publication.

Only the primary diagnosis of coronary heart disease reported in the surveys was considered. Allocating costs according to the primary diagnosis eliminated overlap with non cardiovascular diseases. Costs associated with coronary heart disease as a comorbid condition to some other primary diagnosis were not included. Costs incurred by family or other personal caregivers for coronary heart disease patients cannot be estimated and were not included. The national health expenditures that cannot be allocated to diseases (e.g. construction and research) were not included in the coronary heart disease direct costs.

The indirect morbidity cost of coronary heart disease represents lost earnings from lost work days due to coronary heart disease illness, i.e. lost productivity in 1998. Four groups of persons are included: a) labor force, b) institutionalized c) homemakers, and d) persons unable to work. An estimate of this cost for coronary heart disease in 1980 was made by the National Center for Health Statistics. That estimate has been adjusted by a 1980-1999 inflation factor derived from mean earnings of full-time year-around workers as reported by the Bureau of the Census.

The indirect mortality cost of coronary heart disease in 1999 represents lost productivity based on lost earnings attributed to premature deaths from coronary heart disease in that year. It was estimated by applying the numbers of coronary heart disease deaths in 1995, by age and sex, reported from national vital statistics, to the age-sex estimates of the present value of lifetime earnings discounted at six percent. These lifetime values were estimated for 1992 by Dr. Dorothy Rice (University of California, San Francisco) and provided to the National Heart, Lung, and Blood InstituteI on July 17, 1999. They are not published. Those values were inflated to 1998 using the inflation factors mentioned above. Coronary heart disease deaths in 1993 were those where coronary heart disease was the underlying cause of death regardless of what other contributing causes may have been present. Other deaths, where coronary heart disease was a contributing cause, were not included. The accuracy of estimates of the present value of lifetime earnings has not been assessed by anyone at NHLBI; estimates were taken at face value.